

SECTION 07210

BUILDING INSULATION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Thermal insulation walls.
 - 2. Concealed acoustical insulation at interior partitions where indicated.
 - 3. Exposed acoustical treatment.
 - 4. Miscellaneous accessories.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- C. Related Sections
 - 1. Section 07511 - Built-Up Asphalt Roofing: Provision of tapered insulation.
 - 2. Section 07840 - Fire stopping: Provision of firesafing.
 - 3. Section 09100 - Metal Support Assemblies: Provision of framing.
 - 4. Section 09250 - Gypsum Board: Provision of gypsum board.

1.02 REFERENCES

- A. ASTM - American Society for Testing and Materials
 - 1. C578 - Standard Specification for Preformed, Cellular Polystyrene Thermal Insulation.
 - 2. C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation.
 - 3. C665 - Standard Specification for Mineral Fiber Blanket Thermal-Insulation for Light Frame Construction and Manufactured Housing.
 - 4. E84 - Test Method for Surface Burning Characteristics of Building Materials.
 - 5. E136 - Test Method for Behavior of materials in a Vertical Tube Furnace at 750 Degrees C.
- B. UL - Underwriters Laboratories, Inc.

1.03 DEFINITIONS

- A. Thermal Resistivity: Where the thermal resistivity of insulation products are designated by "r-values", they represent the reciprocal of thermal conductivity (k-values). Thermal conductivity is the rate of heat flow through a homogenous material exactly 1 inch thick. Thermal resistivities are expressed by the temperature difference in degrees Fahrenheit between the 2 exposed faces required to cause 1 BTU to flow through 1 square foot per hour at mean temperatures indicated.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for insulation products specified.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Protect fiberglass and acoustical materials from moisture during storage and installation.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Acoustical Sound Attenuation Insulation
 - 1. Unfaced, friction-fit, fiberglass batts, 3-1/2 inches, 5-1/2 inches thick and 9 inches thick as indicated, conforming to ASTM C665, Type 1, ASTM E119, and UL listed for 1 and 2 hour fire ratings and having the following fire resistive requirements when tested in accordance with ASTM E84:
 - a. Flame Spread: 25 or less.
 - b. Smoke Developed: 450 or less.
 - 2. Manufacturer: Owens-Corning Fiberglas Corp., "Sound Attenuation Batts"; Johns Manville, or equal.
 - 3. Safing Insulation is specified in Section 07840.
- B. Accessories
 - 1. Insulation Support: Galvanized springwire as required.
 - 2. Spindle Fasteners at Metal Deck
 - a. Galvanized steel or aluminum; length as required to secure placement and permit bending back over washer.
 - b. Manufacturer: Stic-Klip Mfg. co.; H. A. Jones Co., or equal.

2.02 ACOUSTICAL TREATMENTS

- A. Matte-Faced Insulation, AP-3: Semi-rigid (2 lbs/cu. ft.) fiberglass with black protective matte facing, Owens Corning "Select Sound" White Acoustic Blanket (800-438-7465), Pelican PFW Perforated Acoustic Board (504-734-1711), Johns Manville Insul-Shield White, (800-644-4013, 800-622-0149), Certain Teed AcoustaBlanket White (949-589-9486, 610-341-7000).
 - 1. Facing Color
 - a. At Electrical and Data (BDF and IDF) Rooms: White.
 - 2. Thickness
 - a. AT-1: 1 inch.
 - b. AT-2: 2 inches.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Apply insulation units to substrate by method indicated, complying with manufacturer's recommendations. If no specific method is indicated, use mechanical anchorage to provide permanent placement and support of units.
- B. Extend insulation full thickness as indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections that interfere with placement.

- C. Apply a single layer of insulation of required thickness, unless otherwise shown or required to make up total thickness.
- D. Install spindle fasteners at metal deck insulation in accordance with manufacturer's written instructions.

3.02 INSTALLATION OF ACOUSTICAL INSULATION

- A. Install 5-1/2 inch thick batt insulation above all suspended gypsum board ceilings and floor joist cavities.
- B. Install 9 inch thick batt insulation in attic spaces and above resiliently suspended gypsum board ceilings and where indicated in Drawings.
- C. Install batt insulation to fill framing cavities and fasten to framing to prevent slipping at sound-rated construction.
- D. Install insulation batts around perimeter of piping and electrical boxes in sound-rated wall/ceiling cavities.
- E. Install safin insulation at duct and pipe penetrations of sound-rated constructions.
- F. Pack sound insulation batts around perimeter of piping and electrical boxes in sound rated wall/ceiling cavities.
- G. Install black- or white-faced insulation on stick-clips with black protective caps, using contact adhesive as manufactured by 3M, "77N".
- H. At all exposed conditions in occupiable spaces, provide edge trim at edges of all wall installations. Where the insulation is not black, it must not be visible at joints between adjacent panels.
- I. Install 2-inch thick black- or white-faced insulation on all mechanical room, electrical room, and elevator machine room ceilings and wall surfaces as indicated on the Drawings.

3.03 PROTECTION

- A. General: Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation will be subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION